

REMARKS

Claims 1-3, 8-13, 16-20 and 25-36 are currently pending in this application. Claims 1, 8, 9, 16, 18 and 25 have been amended and new claims 26-36 have been added to more particularly point out Applicant's invention. Claims 4-7, 14, 15 and 21-24 have been canceled. No new matter has been added to this application.

Allowable Subject Matter

Applicants acknowledge the Examiner's indication that claims 15 and 16 would be allowable if rewritten in independent form to include the limitations of the base claim and any intervening claims. Applicants have amended independent claim 9 to include the limitations of allowable claim 15 and intervening claim 14. Applicants submit that claim 9, as amended, is in condition for allowance. Claims 10-13, 16 and 17, being dependent upon independent claim 9, are also in condition for allowance.

Rejection of Claims 9, 10, 13 and 17 under 35 U.S.C. § 102 (e)

The Examiner has rejected claims 9, 10, 13 and 17 under 35 U.S.C. § 102 (e) as being anticipated by U.S. Patent No. 6,501,515 B1 (Iwamura). Applicants respectfully traverse the rejection.

As indicated above, Applicants have amended independent claim 9 to include the limitations of claim 15. Applicants respectfully submit that claim 9, as amended, is in condition for allowance. Applicants submit that claims 10, 13 and 17 being dependent upon independent claim 9 are also in condition for allowance. Applicants request that the rejection of claims 9, 10, 13 and 17 under 35 U.S.C. § 102 (e) be withdrawn.

Rejection of Claims 1-3, 8, 9, 18-20 and 25 under 35 U.S.C. § 103 (a)

The Examiner has rejected claims 1-3, 8, 9, 18-20 and 25 under 35 U.S.C. § 103 (a) as being unpatentable over U.S. Patent No. 6,075,895 (Qiao) in view of U.S. Patent No. 6,332,038 B1 (Funayama). Applicants respectfully traverse the rejection.

The present invention is directed to a method for automatically controlling a device. A change in a background of an image from a plurality of images is determined. An object in the image is determined. A gesture is identified according to the trajectory of the object. A determination is made as to whether the gesture corresponds to a valid command. If the gesture corresponds to a valid command, the command is executed.

Qiao discloses a method for recognizing a gesture of an image of a player. A portion of a background image is removed and replaced with the player's image which is mapped to a number of templates to generate a number of template outputs. The template outputs are analyzed to identify pre-defined gestures that correspond to gestures in the image. Qiao is directed to a player of a video game in which a player's movements are replicated by an image of the player that is portrayed on the game display. As such, if the player creates a gesture that emulates kicking or throwing a ball, that gesture is replicated by the player's image.

Applicants submit that Qiao's use of gestures is different than that of the present invention. Applicants' invention is directed to using a gesture to communicate commands that are to be executed by a device such as a virtual endoscope. The present invention detects a gesture and determines if it corresponds to a valid command which is then executed by the device. An example of such a command might be the rotation of the virtual endoscope. Unlike Qiao, the action performed by the device is not an exact replication of the detected gesture. In the present invention, the gesture is effectively a shorthand instruction that is received and interpreted by the device. Furthermore Qiao does

not teach or disclose a system or method that determines whether a gesture corresponds to a valid command and then instructing a device to execute the command as recited in amended claims 1 and 18. As indicated above, Qiao causes a humanoid to replicate the user's gesture.

In addition, as recited in new claim 27, in the present invention, the duration of the time that the gesture is performed also communicates to the device the intensity and scale of the resulting command. For example, if a user rotates his hand, the length of time of the rotation might correspond to the number of degrees that the endoscope is to be rotated. Applicants submit that Qiao does not teach or disclose correlating the length of a gesture to the intensity of the resulting action. Nor does Qiao teach or disclose translating a gesture into a command to be executed by a device. Applicants respectfully submit that Qiao does not teach or disclose Applicants' invention as claimed.

Funayama discloses an image processing device that obtains an electronic image and an image extraction processing device that extracts a part of the image. Funayama does not teach or disclose detecting a gestures, determining if the gesture corresponds to a valid command and having a device execute the command as recited by independent claims 1 and 18. Applicants respectfully submit that neither Qiao nor Funayama, whether taken alone or in combination, teach or disclose Applicants' invention as claimed. Neither Qiao nor Funayama, teach or disclose determining if a gesture corresponds to a valid command and having the device execute the command. Applicants respectfully request that the rejection of claims 1-3, 8, 9, 18-20 and 25 under 35 U.S.C. § 103 (a) be withdrawn.

Rejection of claims 5 and 22 and 6, 7, 23 and 24 under 35 U.S.C. § 103 (a)

Applicants have canceled claims 5-7 and 22-24 thereby making these rejections moot.

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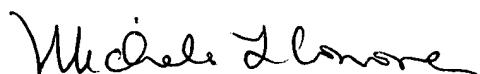
Rejection of claims 11, 12 and 14 under under 35 U.S.C. § 103 (a)

Claims 11 and 12 are dependent upon claim 9 which has been amended to include the limitations of allowable claim 15 and intervening claim 14. As a result, claim 14 has been canceled. Applicants' respectfully submit that claims 11 and 12 are in condition for allowance and request that the rejection of claims 11 and 12 be withdrawn.

Conclusion

Applicant respectfully submits that claims 1-3, 8-13, 16-20 and 25-36, as amended, are in condition for allowance and request that a timely Notice of Allowance be issued in this case. The Examiner is invited to contact the undersigned should he have any questions in this matter.

Respectfully submitted,



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